APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ROSS D. SNYDER & ASSOCIATES, INC.
115 WILD BASIN RD.
SUITE 107
AUSTIN, TX 78746

EXAMINER
HAN, CLEMENCE S

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

   A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
   THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒. Claim(s) _1-46_ is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒. Claim(s) _1-14,23-28,31,35,36 and 38-43_ is/are rejected.
7)☒ Claim(s) _15-22,29,30,32-34,37 and 44-46_ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a)☐ All   b)☐ Some * c)☐ None of:
   1.☐ Certified copies of the priority documents have been received.
   2.☐ Certified copies of the priority documents have been received in Application No. _____.
   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s).

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 19 is objected to because of the following informalities: The

acronyms LDP and RSVP are used without proper prior definitions. Appropriate

correction is required.

2.   Claim 30 is objected to because of the following informalities: "The data

communication of claim 24" in the first line is a typographical error of "The data

communication network of claim 24". Appropriate correction is required.

3.   Claim 36 is objected to because of the following informalities: The acronym

SPVC is used without proper prior definitions. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

5.   Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter

which applicant regards as the invention.

6.   Claim 7 recites the limitation "the switched connection" in the first line.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102

that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this
or a foreign country, before the invention thereof by the applicant for a patent.

8.   Claim 1–5, 23, 24–28, 35, 36, 39, 42 and 43 are rejected under 35

U.S.C. 102(a) as being anticipated by Petersen et al. (US Patent 6,049,530).

In regard to claim 1, Petersen teaches a method for rerouting a connection in

a data communication network, comprising: establishing the connection in the data

communication network, wherein the connection is managed by a control plane

(Column 4 Line 30–37); monitoring status of a selected characteristic of the

connection using a user connection monitoring function (Column 2 Line 56–59);

and when the status of the selected characteristic is determined to be unacceptable,

initiating control plane rerouting of the connection (Column 2 Line 50–55).

In regard to claim 2, Petersen teaches the selected characteristic including

continuity on the connection (Column 7 Line 1–4).

In regard to claim 3, Petersen teaches the selected characteristic including at

least one of: data corruption on the connection, data loss on the connection, latency

along the connection, and misinsertion of data on the connection (Column 7 Line 1–4).

In regard to claim 4, Petersen teaches the data communication network supporting asynchronous transfer mode (ATM) protocol (Column 4 Line 22–29).

In regard to claim 5, Petersen teaches the control plane is a signaling plane (Figure 4).

In regard to claim 23, Petersen teaches a data communication network, comprising: a source node 105; a destination node 110 operably coupled to the source node via a first connection that carries a data stream, wherein the source node injects diagnostic traffic into the data stream (Column 6 Line 1–3), wherein the destination node monitors the diagnostic traffic in the data stream (Column 9 Line 31–36); and a control block operably coupled to the source node and the destination node, wherein when status of a selected characteristic associated with the diagnostic traffic is determined to be unacceptable, the control block performs a control plane reroute that establishes a second connection that couples the source node and the destination node (Column 2 Line 50–55).

In regard to claim 24, Petersen teaches the data stream including a plurality of asynchronous transfer mode (ATM) cells (Column 4 Line 22–29).

In regard to claim 25, Petersen teaches the diagnostic traffic including operation and management (OAM) continuity checking cells (Column 9 Line 10–11).

In regard to claim 26, Petersen teaches the status of the selected characteristic determined to be unacceptable when loss of continuity is detected for a time period that exceeds a predetermined threshold (Column 5 Line 8–11).

In regard to claim 27, Petersen teaches the diagnostic traffic including operation and management (OAM) performance monitoring cells (Column 9 Line 37–39).

In regard to claim 28, Petersen teaches the status of the selected characteristic determined to be unacceptable when a property associated with OAM performance monitoring exceeds a predetermined threshold (Column 16 Line 2–17).

In regard to claim 35, Petersen teaches the selected characteristic including at least one of: data corruption on the first connection, data loss on the first connection, latency along the first connection, and misinsertion of data on the first connection (Column 7 Line 1–4).

In regard to claim 36, Petersen teaches a method for rerouting a connection in an asynchronous transfer mode (ATM) data communication network,

comprising: establishing the SPVC in the ATM data communication network,

wherein the connection is managed by a control plane (Column 4 Line 30–37);

using operation and management (OAM) cells to monitor at least one characteristic

of the connection (Column 2 Line 56–59); and when status of the at least one

characteristic is determined to be unacceptable, initiating control plane rerouting of

the connection (Column 2 Line 50–55).

In regard to claim 39, Petersen teaches the control plane as a signaling plane

(Figure 4).

In regard to claim 42, Petersen teaches a method for rerouting a connection

in a data communication network, comprising: detecting a fault in the connection

in the user plane; and triggering a reroute of the connection in the control plane

based on the fault detected (Column 2 Line 50–55).

In regard to claim 43, Petersen teaches detecting a fault further comprising

detecting a fault using operation and management (OAM) services running within

the user plane (Column 9 Line 37–39).

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claim 6, 8–14, 31, 38, 40 and 41 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Petersen et al. in view of Hsing et al. (US Patent

6,167,025).

In regard to claim 6 and 40, Petersen teaches a method for rerouting a

connection in a data communication network, comprising: establishing the

connection in the data communication network, wherein the connection is managed

by a control plane (Column 4 Line 30–37); monitoring status of a selected

characteristic of the connection using a user connection monitoring function

(Column 2 Line 56–59); and when the status of the selected characteristic is

determined to be unacceptable, initiating control plane rerouting of the connection

(Column 2 Line 50–55). Petersen, however, does not teach the signaling plane

using private network-to-network interface (PNNI). Hsing teaches the signaling

plane using private network-to-network interface (PNNI) (Column 5 Line 39–43).

It would have been obvious to one skilled in the art to modify Petersen to use the

signaling plane using private network-to-network interface (PNNI) as taught by

Hsing in order to use in private ATM network (Column 5 Line 41–42).

In regard to claim 8, 31 and 38, Hsing teaches the connection is a switched

connection (Column 3 Line 47–50).

In regard to claim 9, Petersen teaches the user connection monitoring function utilizes operation and management (OAM) cells (Column 9 Line 37–39).

In regard to claim 10, Petersen teaches the user connection monitoring function includes OAM continuity checking (Column 9 Line 10–11).

In regard to claim 11, Petersen teaches determining that the status of the selected characteristic is unacceptable further comprises detecting a loss of continuity for a predetermined time period (Column 5 Line 8–11).

In regard to claim 12, Petersen teaches the user connection monitoring function includes OAM performance monitoring (Column 9 Line 37–39).

In regard to claim 13, Petersen teaches determining that the status of the selected characteristic is unacceptable further comprises determining that a property of the selected characteristic exceeds a predetermined threshold (Column 16 Line 2–17).

In regard to claim 14, Petersen teaches the selected characteristic further comprises a plurality of selected characteristics (Column 9 Line 37–39), wherein each selected characteristic of the plurality of selected characteristics has a corresponding predetermined threshold, wherein determining that the status of the selected characteristic is unacceptable includes determining that a property corresponding to at least one selected characteristic of the plurality of selected

characteristics exceeds the corresponding predetermined threshold for the at least

one selected characteristics (Column 16 Line 2–17).

In regard to claim 41, Petersen teaches the OAM cells as OAM continuity

checking cells (Column 9 Line 10–11), wherein the at least one characteristic

includes continuity, wherein status of the continuity is determined to be

unacceptable when a lack of continuity is detected for a time period that exceeds a

configurable threshold (Column 16 Line 2–17).

Allowable Subject Matter

11.   Claim 7 would be allowable if rewritten to overcome the rejection(s) under

35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of

the limitations of the base claim and any intervening claims.

12.   Claim 15–22, 29, 30, 32–34, 37 and 44–46 are objected to as being

dependent upon a rejected base claim, but would be allowable if rewritten in

independent form including all of the limitations of the base claim and any

intervening claims.

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. The following patents are cited to further show the state of

the art with respect to the routing in general.

U.S. Patent 6,636,484 to Agrawal et al.

U.S. Patent 6,597,689 to Chiu et al.

14.   Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Clemence Han whose telephone number is

(703) 305-0372. The examiner can normally be reached on Monday-Thursday 7 -

5.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Huy Vu can be reached on (703) 308-6602. The fax phone

number for the organization where this application or proceeding is assigned is

703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR

only. For more information about the PAIR system, see http://pair-

direct.uspto.gov. Should you have questions on access to the Private PAIR system,

contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. H.

Clemence Han
Examiner
Art Unit 2665

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600